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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,093	03/30/2001	Bruce D. Ulrich	SLA 0494	9061

7590 05/07/2004

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EXAMINER

WILLIAMS, ALEXANDER O

ART UNIT	PAPER NUMBER
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2826

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/822,093		Applicant(s) UIRICH	
	Examiner Alexander O Williams		Art Unit 2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 20 January 2004.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-26 is/are pending in the application.

4a) Of the above claim(s) 2-9 and 11 to 26 is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1 and 10 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some * c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Serial Number: 09/822093 Attorney's Docket #: SLA 494
Filing Date: 3/30/01; claimed foreign priority to //9

Applicant: Ulrich et al.

Examiner: Alexander Williams

Applicant's election of species (claims 1 and 10) filed 1/20/04, has been acknowledged.

This application contains claims 2 to 9 and 11 to 26 drawn to an invention non-elected without traverse.

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The disclosure is objected to because of the following informalities: On page 7, line 5, "70 as D(sub)ref" is not shown I the drawing of figure 2.

Appropriate correction is required.

The drawings are objected to because there are two figures labeled "figure 13." The second figure should be labeled --figure 14--. In figure 2, there on 2 items labeled "76". D(sub)ref should be labeled --70--. Also, in figures 9 and 10, "102" is not shown.

Correction is required.

Claims 1 and 10 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is unclear and confusing to what is meant by "wherein the second two-dimensional array has a second pitch defined by the sum of the second distance

across each shape and the second distance between adjacent shapes." What shows this?

In claim 10, it is unclear and confusing to what is meant by "first two dimension array of spaced is a light field pattern. What shows this?

Any of claims 1 and 10 not specifically addressed above are rejected as being dependent on one or more of the claims which have been specifically objected to above.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 10, **insofar as they can be understood**, are rejected under 35 U.S.C. § 102(b) as being anticipated by Cohen (U.S. Patent # 6,027,630).

1. Cohen (figures 1 to 30) specifically figures 4a to 5e show a vernier pattern formed on a substrate **144** comprising: a) a first two-dimensional array of spaced shapes **156** having a first distance across each shape and a first distance between adjacent shapes patterned overlying the substrate, wherein the first two-dimensional array has a first pitch defined by the sum of the first distance across each shape and the first distance between adjacent shapes; b) a second two-dimensional array of spaced shapes having a second distance across each shape and a second distance between adjacent shapes patterned with photoresist **142** overlying the first two-dimensional array, wherein the second two-dimensional array has a second pitch defined by the sum of the second distance across each shape and the second distance between adjacent shapes; and c) wherein the second pitch is different than the first pitch. (see column 18, line 27-33) Another example of a useful alignment method employs a vernier pattern in which a pattern of fine lines having a first pitch is deposited over a second pattern of lines having a different pitch. The pitch spacing of the deposited pattern compared to the existing pattern provides an indication of the alignment error.

10. The vernier of claim 1, Cohen show wherein the first two-dimensional array of spaced shapes is a light field pattern.

The listed references are cited as of interest to this application, but not applied at this time.

Field of Search	Date
U.S. Class and subclass: 257/797 430/22,321,323; 356/401,247 204/297.05,224 R, 279	4/30/04
Other Documentation: foreign patents and literature in 257/	4/30/04

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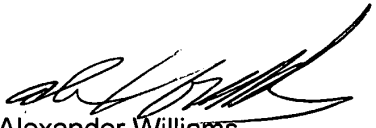
Electronic data base(s): U.S. Patents	4/30/04
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander O Williams whose telephone number is (571) 272 1924. The examiner can normally be reached on M-F 6:30-7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272 1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AOW
4/30/04


Alexander Williams
Primary Examiner